

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V

EPA Region 5 Records Ctr.



335343

DATE: June 5, 1979

SUBJECT: Occurrence and distribution of congenital birth defects in Sauk Village, IL

FROM: Charles T. Grigalauski  
Hazardous Waste Management Section

TO: Karl J. Klepitsch, Jr.  
Chief, Waste Management Branch

The purpose of this memorandum is to summarize a field investigation which was conducted on May 18, 1979, by Dr. Lyman Condie, Office of Toxic Substances Region V, USEPA and the author subsequent to phone conversations held between Mrs. Gloria Gomez, Dr. Condie, and the author on May 17, 1979.

Dr. Condie and I arrived at the Gomez residence about 10:00 am and conducted an interview with Mrs. Gomez. Mrs. Gomez said that their home was built about 9 years ago and that she, her husband, and two children moved into their residence after construction. Mrs. Gomez's third child, Carl, was born 15 months ago with a congenital birth defect which was diagnosed as "monkey feet" by a pediatrician, Joseph Shapiro, M.D., of Michael Reese Hospital. Five months ago, Mr. Gomez took her son to a podiatrist in Lansing, Illinois by the name of Dr. Gasbarro. Dr. Gasbarro diagnosed the problem as "metatarsus deductus" and wanted to place casts on the child's feet. Mrs. Gomez has submitted an application for surgical admission of her son to Shriner's Hospital which treats children's disabilities.

Mr. Gomez' next-door neighbor to the south is Mrs. Sue Matusiak, 21741 Gailine, Sauk Village, Illinois. Mrs. Matusiak has lived at this residence for nine years and has had 3 sons born during this time. All three of the children were born with minor birth defects in the form of foot ailments similar to the Gomez' son, Carl. The middle age son of the Matusiak's is about 6 years old and has received orthopedic treatment which has not successfully corrected the child's disability. The two other sons were treated with orthopedic shoes and the problems were corrected.

Directly west across the street from the Matusiak home is the Pelaez residence at 21736 Gailine. The Pelaez have four children; three of which are normal. The one Pelaez son born while they were residing at this current address has a congenital scoliosis and club foot and is currently being treated at the Mayo Clinic at Rochester, Minnesota. The Pelaez son is 2½ years old.

Three houses to the north of the Gomez residence is the Jennings' residence at 21725 Gailine. Mrs. Jennings has 5 children, 2 of which were born while living at the above address. Of these two Jennings' children, the first was born with a minor leg problem. His age is 7½ years. The other son was born with a congenital foot defect. Both children were treated and have had the impairments corrected.

A family two residences south of the Gomez home recently moved. a boy and a girl were born to the family while living at that residence. Both children had a congenital hearing impairment.

A family across the street and about five homes north has four children. Mrs. Gomez thought that three of the children were mentally retarded.

Mrs. Gomez said that she knew of 4 children in Sauk Village which developed leukemia between 1970 and 1974. The population of Sauk Village was about 6000 during that time and has nearly doubled since that time. The occurrence of leukemia for this population may not be statistically significant.

The building contractor of the subdivision in which the Gomez live is a Mr. Matt Teolis (312)758-2220. Mr. Teolis has built many homes in the area for many years.

The Gomez water supply system to their home is distributed by a 3/4" copper pipe. Copper tubing is used to distribute water from the water heater.

Information was provided to the author from Mr. Richard Powell, Illinois Environmental Protection Agency, Division of Public Water Supply, Aurora, IL, regarding water quality of the Sauk Village water supply system. The water quality of the Village meets Interim Primary Drinking Water Standards. The water is very hard as  $\text{CaCO}_3$  and ranges from 482 mg/l. to 520 mg/l. TDS of the three City wells is below 600 mg/l. Barium concentrations are all 0.1 mg/l. or below. The finished water has been treated with chlorine, fluorine, and polyphosphates.

Sauk Village has no heavy industry. The closest chemical processors and related industries are located two or more miles away in Chicago Heights and East Chicago Heights, Illinois.

The historical backgrounds of the aforementioned families were discussed briefly with Mrs. Gomez. The Pelaez' emigrated from Cuba to the U.S. Mr. Pelaez was a dentist in Cuba, taught in the U.S. for awhile and is currently practicing dentistry. Mrs. Pelaez teaches high school Spanish. Mr. Gomez is formerly an insurance representative and currently is an ironworker at Inland Steel, Gary, Indiana. Mrs. Gomez worked for eight years at the South Chicago Community Hospital in a respiratory therapy unit. Mr. Jennings was a pipefitter and a heating and air conditioning serviceman. He has been an interstate truck driver for the past 1½ years. Mrs. Jennings is and has been a housewife for many years. She has worked for short periods of time at a nursing home. Mrs. Matsuiak is a housewife and formerly worked at a department store.

Mrs. Gomez said that her son has had allergic reactions to various materials since he was born. She knew of no miscarriages or stillbirths in the neighborhood. A cropdusting plane was noted applying pesticides to farm fields about a mile north of their residence several years ago. The neighborhood families shop at different food stores, usually in Dyre, Indiana. The closest large truck

garden farm is about 2 miles east of the Gomez residence. A leafy vegetable is grown which may require a specific herbicide or pesticide. Mrs. Gomez said that no other children were born in the immediate neighborhood since about 1970 except for those stated previously. Since the congenital problems apparently occurred while the families resided in Sauk Village, Mrs. Gomez wanted to know if the problems were environmentally related.

After interviewing Mrs. Gomez, Dr. Condie and I drove north from the Gomez home. We stopped and talked to an employee of Salisbury Engineering of Griffith, Indiana. Salisbury was conducting soil borings for a proposed water supply reservoir. The drillers had completed one soil boring about 3/8 mile north northeast of the Gomez home. This would be in the NW $\frac{1}{4}$  of the NE $\frac{1}{4}$ , Section 25, T. 35 N, R. 14 E, of the 3rd Principal Meridian. The log of the boring is as follows:

<u>Depth in feet</u>	<u>Description</u>
0-3	Topsoil
3-8	Stiff brown silty-clay Pentrometer 4.5+
8-11	Stiff brown silty-clay
11-13	Brown gray medium coarse sand with trace shale.
13-18	Loose medium sand and silt. Pentrometer 1.9 to 3.7.
18-22	Medium gray sand to silt.
22-28	Medium dense sand w/gravel.
28-40	Coarse gray sand w/trace of gravel. "N" values 58, 56, 71 for total of last foot.

Static water level @ 14.4 feet after drilling.

Sauk Village is located on the Tinley Moraine. (Willman, et. al., 1975)\* which is a portion of the Joliet Sublobe of the Lake Michigan Lobe of Wisconsinan Age glacial drift. The soils in the area are of the Wadsworth Till Member of the Wedron Formation and characterized by clayey gray tills of the Lake Border Morainic System.

Mayor Ed Paesel of Sauk Village was interviewed in the afternoon. Mayor Paesel stated that the area in which the Gomez residence is located was formerly farmland in tillage and could not have been used as a dumping ground. Air photos from 1960 of the area confirmed that the subdivision was farmland. The mayor said there has been no cropdusting in the area for 3 or 4 years and there have been no train derailments or spillages of hazardous materials or potentially teratogenic substances in the recent past. There are several old STP sludge lagoons in the vicinity but they are down-gradient from the subdivision.

The Public Works Director, Ed Niefert, was also interviewed. The Village is

\*H.B. Willman, et.al., Handbook of Illinois Stratigraphy, Bulletin 95 of the Illinois State Geological Survey (Urbana; Department of Registration and Education, 1975), p.229.

currently pumping their drinking water from wells number 1 and 2. The pumps are set at 125 feet and yield about 800,000 gpd.

I received a call from Mr. Ed Kalvelage while at the Mayor's office. Mr. Kalvelage has lived and farmed in the area for over 60 years. His family originally settled in Sauk Village in 1834. Mr. Kalvelage said that the area in question was known as the Lawler Ranch and was used as a cattle stock yard over 40 years ago. Malathion or parathion could have been used as fly spray but he had no recollection of any dumping at the farm or related activity.

The Illinois EPA, Division of Public Water Supply, contacted me subsequent to the investigation. On or about June 1, 1979, a 10 day composite sampling program will be initiated of the drinking water at the Gomez home. The IEPA will analyze the drinking water quality for heavy metals and perform general organic scans. The USEPA will run gross alpha and beta radiation counts at the Central Regional Laboratory. If any radiation counts are high, the EPA Eastern Environmental Radiation Facility at Montgomery, Ala. will run specific elements and isotopes.